

1FW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Patent Application of

**IONESCU et al**

Serial No. **10/507,920**

Filed: **October 19, 2004**

Confirmation No.: 6284

Atty. Ref.: **2590-100**

Group: **2812**

Examiner: **(unknown)**

For: **PROCESS FOR MANUFACTURING MEMS**

\* \* \* \* \*

**July 18, 2005**

**Initial Patent Examination's Filing Receipt Corrections**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

**REQUEST FOR CORRECTED FILING RECEIPT**

Attached is a copy of the official Filing Receipt whereon correction of the listing of the inventors' names is requested.

Applicants' surnames are listed first on the Official Filing Receipt. The correct listing of the Applicants' names should be as follows:

Mihai Adrian IONESCU  
Philippe FLUCKIGER  
Cyrille HIBERT  
Raphael FRITSCHI  
Vincent POTT

Attention is drawn to the front page of the published PCT Application No. 03/078299 which bears this out, a copy of which is attached.

A copy of the Declaration is also attached where the Applicants mistakenly identified the inventors in an incorrect fashion, i.e., last name first, followed by the middle initial/name, then the first name. In doing so it will be noted that the last name was typed in solid caps.

In order to further clarify this situation an Application Data Sheet is also enclosed.

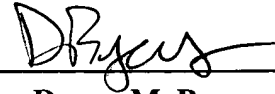
**IONESCU et al**  
**Serial No. 10/507,920**

A corrected filing receipt is requested.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

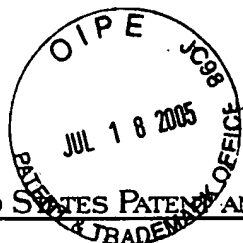


**Duane M. Byers**

**Reg. No. 33,363**

**DMB:lfo**

901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/507,920	10/19/2004	2812	525	2590-100	11	20	1

CONFIRMATION NO. 6790

23117  
 NIXON & VANDERHYE, PC  
 901 NORTH GLEBE ROAD, 11TH FLOOR  
 ARLINGTON, VA 22203

## FILING RECEIPT



\*OC000000016292509\*

Date Mailed: 06/17/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

## Applicant(s)

Mihai Adrian Ionescu Ionescu Adrian Mihai, Lausanne, SWITZERLAND;  
 Philippe Fluckiger Fluckiger Philippe, Bevaix, SWITZERLAND;  
 Cyrille Hibert Hibert Cyrille, St-Georges, SWITZERLAND;  
 Raphael Fritschi Fritschi Raphael, Lausanne, SWITZERLAND;  
 Vincent Pott Pott Vincent, Bramois, SWITZERLAND;

**Power of Attorney:** The patent practitioners associated with Customer Number 23117.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/CH02/00490 09/06/2002

## Foreign Applications

SWITZERLAND PCT/CH02/00165 03/20/2002

**Projected Publication Date:** 09/22/2005

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

Process for manufacturing mems

**Preliminary Class**

438

---

**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
25 September 2003 (25.09.2003)

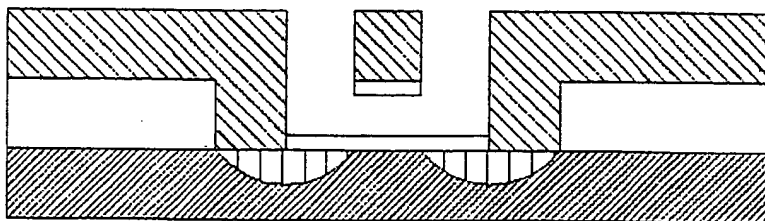
PCT

(10) International Publication Number  
**WO 03/078299 A1**

- (51) International Patent Classification<sup>7</sup>: **B81B 3/00**, H01L 21/336 (74) Agent: **ROLAND, André**; Avenue Tissot 15, cp 1255, CH-1001 Lausanne (CH).
- (21) International Application Number: PCT/CH02/00490 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date:  
6 September 2002 (06.09.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
PCT/CH02/00165 20 March 2002 (20.03.2002) CH
- (71) Applicant (*for all designated States except US*): **ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL)** [CH/CH]; c/o Service des Relations Industrielles (SRI), CM-Ecublens, CH-1015 Lausanne (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **IONESCU, Mihai, Adrian** [RO/CH]; Av. Victor-Ruffly 16bis, CH-1014 Lausanne (CH). **FLUCKIGER, Philippe** [CH/CH]; ch. des Sagnes 2, CH-2022 Bevaix (CH). **HIBERT, Cyrille** [FR/CH]; Tattes à la Lune, CH-1261 St-George (CH). **FRITSCHI, Raphael** [CH/CH]; Av. d'Yverdon 7, CH-1004 Lausanne (CH). **POTT, Vincent** [CH/CH]; La Crettaz, CH-1967 Bramois (CH).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

WO 03/078299 A1

(54) Title: PROCESS FOR MANUFACTURING MEMS



MEMS tunable capacitors which may be obtained according to the previous cited process.

(57) Abstract: The invention concerns a process for manufacturing a Micro-Electro-Mechanical-System (MEMS) comprising the use of a sacrificial layer, the process being characterized by the fact that the sacrificial layer is made of silicon. The invention also concerns MEMS devices such as SG-MOSEFT, MEMS switches or



2590-.....

Nixon & Vanderhye P.C. (10/99)  
(Domestic Non-Assigned/Foreign) Page 1

**RULE 63 (37 C.F.R. 1.63)**  
**INVENTORS DECLARATION FOR PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

As a below named inventor, I hereby declare that my residence, mailing address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROCESS FOR MANUFACTURING MEMS

the specification of which (check applicable box(es)):

☐ is attached hereto

☐ was filed on

as U.S. Application Serial No.

☒ was filed as PCT International application No.

PCT/CH 02/00490

on

September 6, 2002

And (if applicable to U.S. or PCT application) was amended on

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose to the Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56. I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed or, if no priority is claimed, before the filing date of this application:

Priority Foreign Application(s):

Application Number

Country

Day/Month/Year Filed

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below.

Application Number

Date/Month/Year Filed

I hereby claim the benefit under 35 U.S.C. 120/365 of all prior United States and PCT international applications listed above or below:

Prior U.S./PCT Application(s):

Application Serial No.

Day/Month/Year Filed

Status: patented  
pending, abandoned

PCT/CH 02/00490

September 6, 2002

PCT/CH02/00165

March 20, 2002

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. And on behalf of the owner(s) hereof, I hereby appoint Nixon & Vanderhye P.C., telephone number 703-816-4000 (to whom all communications are to be directed) and the attorneys of: **Customer Number 23117**, individually and collectively owner's/owners' attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent. I also authorize Nixon & Vanderhye to add or delete attorneys from that Customer Number, and to act and rely solely on instructions directly communicated from the person, assignee, attorney, firm, or other organization sending instructions to Nixon & Vanderhye on behalf of the owner(s).

1. Inventor's Signature: 

Inventor:

IONESCU

Adrian

Mihai

Date:

15/09/2004

(first)

MI

(last)

RO  
(citizenship)

Residence: (city)

Lausanne

(state/country) Switzerland

Mailing Address:

Av. Victor-Ruffy 16 Bis, Lausanne, Switzerland

(Zip Code)

1014

2. Inventor's Signature: 

Inventor:

FLUCKIGER

MI

Philippe

Date:

6/10/2004

(first)

MI

(last)

CH  
(citizenship)

Residence: (city)

Bevaix

(state/country) Switzerland

Mailing Address:

Ch. des Sagnes 2, Bevaix, Switzerland

(Zip Code)

2022

**[X] See attached sheet(s) for additional inventor(s) information!!**



2590-.....  
Page 2

Nixon & Vanderhye P.C. (10/99)  
(Domestic Non-Assigned/Foreign)

3. Inventor's Signature: [Signature] Date: 4/10/04  
Inventor: HIBERT (first) MI Cyrille (last) FR (citizenship)  
Residence: (city) St-Georges (state/country) Switzerland  
Mailing Address: Tattes à la Lune, St-Georges, Switzerland  
(Zip Code) 1261
4. Inventor's Signature: [Signature] Date: 4/10/04  
Inventor: FRITSCHI (first) MI Raphael (last) CH (citizenship)  
Residence: (city) Lausanne (state/country) Switzerland  
Mailing Address: Av. d'Yverdon 7, Lausanne, Switzerland  
(Zip Code) 1004
5. Inventor's Signature: [Signature] Date: 4/10/04  
Inventor: POTT (first) MI Vincent (last) CH (citizenship)  
Residence: (city) Bramois (state/country) Switzerland  
Mailing Address: La Crettaz, Bramois, Switzerland  
(Zip Code) 1967
6. Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Inventor: \_\_\_\_\_ (first) MI \_\_\_\_\_ (last) \_\_\_\_\_ (citizenship)  
Residence: (city) \_\_\_\_\_ (state/country) \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
(Zip Code) \_\_\_\_\_

FOR ADDITIONAL INVENTORS, check box [ ] and attach sheet with same information and signature and date for each.



## **Application Data Sheet**

### **Application Information**

Application number:: 10/507,920  
Filing Date:: October 19, 2004  
Application Type:: Regular  
Title:: PROCESS FOR  
MANUFACTURING MEMS  
Attorney Docket Number:: 2590-100  
Total Drawing Sheets:: 11  
Small Entity?: Yes

### **Applicant Information**

Applicant Authority Type:: Inventor  
Primary Citizenship Country:: RO  
Status:: Full Capacity  
Given Name:: Mihai  
Middle Name:: Adrian  
Family Name:: IONESCU  
Name Suffix::  
City of Residence:: Lausanne  
Country of Residence:: Switzerland  
Street of mailing address:: Av. Victor-Ruffy 16 Bis  
City of mailing address:: Lausanne  
Country of mailing address:: Switzerland  
Postal or Zip Code of mailing address:: 1014  
Applicant Authority Type:: Inventor  
Primary Citizenship Country:: CH  
Status:: Full Capacity  
Given Name:: Philippe  
Middle Name::  
Family Name:: FLUCKIGER



Name Suffix::	
City of Residence::	Bevaix
Country of Residence::	Switzerland
Street of mailing address::	Ch. des Sagnes 2
City of mailing address::	Bevaix
Country of mailing address::	Switzerland
Postal or Zip Code of mailing address::	2022
Applicant Authority Type::	Inventor
Primary Citizenship Country::	FR
Status::	Full Capacity
Given Name::	Cyrille
Middle Name::	
Family Name::	HIBERT
Name Suffix::	
City of Residence::	St-Georges
Country of Residence::	Switzerland
Street of mailing address::	Tattes à la Lune
City of mailing address::	St-Georges
Country of mailing address::	Switzerland
Postal or Zip Code of mailing address::	1261
Applicant Authority Type::	Inventor
Primary Citizenship Country::	CH
Status::	Full Capacity
Given Name::	Raphael
Middle Name::	
Family Name::	FRITSCHI
Name Suffix::	
City of Residence::	Lausanne
Country of Residence::	Switzerland
Street of mailing address::	Av. d'Yverdon 7
City of mailing address::	Lausanne

Country of mailing address:: Switzerland  
 Postal or Zip Code of mailing address:: 1004

Applicant Authority Type:: Inventor  
 Primary Citizenship Country:: CH  
 Status:: Full Capacity  
 Given Name:: Vincent  
 Middle Name::  
 Family Name:: POTT  
 Name Suffix::

City of Residence:: Bramois  
 Country of Residence:: Switzerland  
 Street of mailing address:: La Crettaz  
 City of mailing address:: Bramois  
 Country of mailing address:: Switzerland  
 Postal or Zip Code of mailing address:: 1967

#### **Correspondence Information**

Correspondence Customer Number:: 23117

#### **Representative Information**

Representative Customer Number:: 23117

#### **Foreign Priority Information**

Country::	Application Number::	Filing Date::	Priority Claimed::
PCT	PCT/CH02/00165	20 March 2002	Yes
	PCT/CH02/00490	6 September 2002	

#### **Assignee Information**

Assignee Name::	ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE - Services des Relations Industrielles
Street of mailing address::	Ecublens
City of mailing address:	Lausanne
State or Province of mailing address::	Switzerland
Postal or Zip Code of mailing Address::	CH-1015